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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,538	09/06/2000	Michael Lee	INTIP211	9912

21912 7590 11/12/2003  
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EXAMINER

MAURO JR, THOMAS J

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/656,538

Applicant(s)

LEE ET AL.

Examiner

Thomas J. Mauro Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 8,9 and 13-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,10-12 and 18-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-21 are pending. Claims 8-9 and 13-17 are withdrawn from consideration on the grounds that these claims are directed toward a non-elected invention. Claims 1-7, 10-12 and 18-21 were confirmed as being the group of claims directed to the invention elected for present prosecution, without traverse, in the election made over the phone on 10/30/2003.

#### *Election/Restriction*

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- Group I. Claims 1-7, 10-12 and 18-21, drawn to multicasting information to a set of clients, classified in class 709, subclass 244.
- Group II. Claims 13-17, drawn to redirecting failed multicast transmissions, classified in class 709, subclass 239.
- Group III. Claims 8-9, drawn to subscribing to multicast transmissions, classified in class 709, subclass 227.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I, II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as multicasting information to a set of clients by transmitting the information from a primary server to a primary client, upon which the primary client forwards the information to other secondary clients [**Page 4 lines 4-6**]. In the instant case, invention II has separate utility such as redirecting receiving multicast clients from a failed transmitting client by the server sending a message indicating a

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new source for the information to the client [**Page 5 lines 17-21**]. In the instant case, invention III has separate utility such as adding new clients to a multicast group and selecting which existing client will transmit information to the new client [**Page 5 lines 1-3**]. See MPEP § 806.05(d).

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Lee Van Pelt (Reg. No. 38352) on October 30, 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-7, 10-12 and 18-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-9 and 13-17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

*Drawings*

7. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Claim Rejections - 35 USC § 102*

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,910,179 to Mohseni.

With respect to claims 1 and 20-21, Mohseni teaches a method of multicasting information to a set of clients by transmitting the information to a primary client from a server **[Mohseni -- Figure 3 and Col. 3 lines 55-61 --Central station, i.e. server, contacts small number of customer devices, i.e. primary clients]**; and instructing the primary client to forward the information to a secondary client **[Mohseni -- Figure 3 and Col. 3 lines 61-67 -- Col. 4 lines 1-3 -- Customer contacted devices, i.e. primary clients receive data and then transfer to next level of receiving devices]**.

9. Claims 1, 3, 6, 10-12 and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,336,119 to Banavar et al.

With respect to claim 1, Banavar teaches a method of multicasting information to a set of clients comprising: transmitting the information to a primary client from a server [**Banavar -- Figures 1 and 4A and Col. 3 lines 7-12 – Brokers, i.e. primary clients, receive information from central source, i.e. publishing broker (Col. 2 lines 54-55);** and instructing the primary client to forward the information to a secondary client [**Banavar -- Figures 1 and 4A and Col. 3 lines 13-15 – Brokers forward the information to their consumers**].

With respect to claim 3, Banavar further teaches ping clients to determine the network location of the clients [**Banavar -- Col. 5 lines 66-67 – Col. 6 lines 1-3 – Banavar teaches using network location to group clients together. In order to determine the network location, it is required for the server to ping the clients and use that address to determine the client's location on the network. Therefore, this limitation is implicitly taught**].

With respect to claim 6, Banavar teaches a method of multicasting information to a set of clients comprising: determining a network location for each of the clients; selecting a subset of the clients to be primary clients based on the network location [**Banavar -- Col. 5 lines 66-67 – Col. 6 lines 1-3 – In order to group brokers into clusters by network location, it is required that the location be determined, i.e. pinging the clients**]; and transmitting the information to the primary clients for retransmission to other clients in the set of clients [**Banavar -- Figures 1 and 4A and Col. 3 lines 7-15 – Brokers, i.e. primary clients,**

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**receive information from a central source, i.e. publishing broker (Col. 2 lines 54-55) and forward the information to their consumers, i.e. clients].**

With respect to claim 10, Banavar teaches a method of forwarding information from a transmitting client to a receiving client in a multicast group comprising: receiving an instruction from a multicast server to forward information to the receiving client [**Banavar -- Col. 2 lines 54-57 – Multicast server, i.e. publishing broker, sends instruction, i.e. event, to subscriber broker to forward information on to subscribing clients**]; receiving the information [**Banavar -- Col. 2 line 56**]; and forwarding the information to the receiving client [**Banavar -- Col. 2 lines 58-59**].

With respect to claim 11, Banavar further teaches displaying the information to a user [**Banavar -- Col. 2 lines 58-59 – Clients subscribe to the information in order to watch/view the future information in which they have interest. Therefore, the reference implicitly teaches that the information is displayed to the client**].

With respect to claim 12, Banavar further teaches displaying the information to a user without positively indicating to the user that the information is being forwarded [**Banavar -- Col. 3 lines 13-15 and Col. 6 lines 41-44 and 61-63 – Because only brokers are needed for configuring, it is implicitly taught that the forwarding of events is transparent to the clients; therefore, they do not positively know what is going on in the background, i.e. forwarding of messages**].

With respect to claim 18, Banavar teaches a client interface configured to transmit the information to a primary client from the server and to instruct the primary client to forward the information to a secondary client [**Banavar -- Col. 3 lines 16-27 – Publisher broker’s interface, i.e. program, transmits information to subscriber brokers, i.e. primary clients, which forward information on to it’s clients, i.e. secondary clients**].

With respect to claim 19, Banavar teaches a client configured to forward multicast information to another client comprising: a server interface configured to receive the information from the server [**Banavar -- Col. 2 lines 54-56 – Subscribing broker receives message, i.e. event, from publishing broker, i.e. server**]; and a client interface configured to forward the information to the other client [**Banavar -- Col. 2 lines 58-59**].

With respect to claim 20, this is a system claim corresponding to the method claimed in claim 1. It has similar limitations; therefore, claim 20 is rejected based upon the same rationale.

With respect to claim 21, a computer program product for multicasting information, the computer program product being embodied in a computer readable medium and comprising computer instructions [**Banavar -- Col. 3 lines 16-21**] for: transmitting the information to a primary client from a server [**Banavar -- Figures 1 and 4A and Col. 3 lines 7-12 – Brokers, i.e. primary clients, receive information from central source, i.e. publishing broker (Col. 2 lines 54-55)**]; and instructing the primary client to forward the information to a secondary client



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**[Banavar -- Figures 1 and 4A and Col. 3 lines 13-15 – Brokers forward the information to their consumers].**

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2, 4-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,336,119 to Banavar et al. in view of “Core Selection Methods for Multicast Routing” to Calvert et al.

Regarding claim 2, Banavar does not explicitly teach the invention as claimed. He does, however, teach that performance is an issue and that choosing brokers from a client pool is significant for performance issues **[Banavar -- Col. 5 lines 61-62]**. Calvert, however, teaches the invention substantially as claimed, receiving performance information from the set of clients **[Calvert -- Page 640, Sec. 3.4, Paragraph 2 – In order to know the performance of nodes, the system must receive performance information, i.e. bandwidth and delay, from each of the nodes]**. Calvert includes performance in choosing the center node in order to increase the performance and distribution of packets in a multicast environment.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to include receiving and using performance criteria as taught by Calvert, into the invention of Banavar, in order to achieve increased performance and distribution of packets of information to all nodes in a short amount of time.

Regarding claim 4, Banavar does not explicitly teach the invention as claimed. Calvert, however, teaches the invention substantially as claimed, wherein the information is streaming video [**Calvert Page 638, Sec 2.2 – Videoconference applications, i.e. streaming video**]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include streaming video as the multicast data as taught by Calvert, into the invention of Banavar, in order to efficiently send out data which normally would take up a lot of bandwidth and time.

Regarding claim 5, Banavar in view of Calvert teaches the invention substantially as claimed, a method of multicasting information to a set of clients comprising: determining a performance parameter for each of the clients [**Calvert -- Page 640, Sec. 3.4, Paragraph 2 – In order to know the performance of nodes, the system must receive performance information, i.e. bandwidth and delay, from each of the nodes**]; and transmitting the information to the primary clients for retransmission to other clients in the set of clients [**Banavar -- Figures 1 and 4A and Col. 3 lines 7-15 – Brokers, i.e. primary clients, receive information from central source, i.e. publishing broker (Col. 2 lines 54-55) and forward the information to their consumers, i.e. clients**]. Banavar fails to teach selecting a subset of the clients to be primary clients based on the performance parameter.

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Calvert, however, teaches this limitation substantially as claimed, selecting a client, based on performance, to be a primary client **[Calvert -- Page 640, Sec. 3.5, Paragraph 2 – Core node, i.e. primary client, is chosen using a performance based method]**.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate choosing a core node, i.e. primary client, based upon performance as taught by Calvert, into the invention of Banavar, in order to achieve a fast performing multicasting system which routes the packets of information to all nodes in a short amount of time.

Regarding claim 7, Banavar in view of Calvert teaches the invention substantially as claimed, a method of multicasting information to a set of clients comprising: determining a network location for each of the clients **[Banavar Col. 5 lines 66-67 – Col. 6 lines 1-3 – In order to group brokers into clusters by network location, it is required that the location be determined, i.e. pinging the clients];**

determining a performance parameter for each of the clients **[Calvert -- Page 640, Sec. 3.4, Paragraph 2 – In order to know the performance of nodes, the system must receive performance information, i.e. bandwidth and delay, from each of the nodes];**

selecting a subset of the clients to be primary clients based on the performance parameter **[Calvert -- Page 640, Sec. 3.5, Paragraph 2 – Core node, i.e. primary client, is chosen using a performance based method]** and the determined network location **[Banavar Col. 5 lines 66-67 – Col. 6 lines 1-3];** and

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transmitting the information to the primary clients for retransmission to other clients in the set of clients [Banavar -- Figures 1 and 4A and Col. 3 lines 7-15 – Brokers, i.e. primary clients, receive information from central source, i.e. publishing broker (Col. 2 lines 54-55) and forward the information to their consumers, i.e. clients].

### *Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Novaes (Patent Application Publication US 2002/0165977) discloses a system for dynamic multicast routing using groups comprised of group leaders and nodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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TJM

November 3, 2003



**DAVID WILEY**  
**SUPERVISORY PATENT EXAMINER**  
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